Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte DAVID E. THOMAS and JIAN X. LI

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Appeal No. 2000-1435
Application No. 08/601,785

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HEARD: JULY 16, 2003

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Before OWENS, PAWLIKOWSKI, and MOORE, *Administrative Patent Judges*.

PAWLIKOWSKI, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1 through 23. Claims 24 through 32 have been deemed allowable.

Claims 1, 9, 15, and 21 are representative of the subject matter on appeal, and are set forth below:

1. A method of producing a foamed polymeric material, comprising saturating a portion of unfoamed polymeric material having a thickness dimension transverse to opposed surfaces with a fluid; and

expanding said unfoamed polymeric material in only said thickness dimension to form said foamed polymeric material with interplanar gas-filled cells in said material having a dimension in a direction parallel to said opposed surfaces greater than a dimension in a direction parallel to said thickness dimension.

9. A method for forming a foamed polymeric object, comprising preforming the object from an unfoamed polymeric material having a planar crystalline structure;

saturating the preformed object with a fluid in an atmosphere at a predetermined ambient pressure; and

reducing the ambient pressure to a pressure at which the preformed object is supersaturated with the fluid.

15. A foamed polymeric material, having a thickness dimension transverse to opposed surfaces comprising gas-filled cells each having one dimension in a direction that is parallel to said opposed surfaces that is larger than a second dimension in a direction parallel to said thickness dimension.

21. A foamed polymeric object, formed by:
shaping the object from an unfoamed polymeric material having a planar crystalline structure;

saturating the shaped object with a fluid in an atmosphere having an ambient pressure; and

reducing the ambient pressure to a pressure at which the shaped object is supersaturated with the fluid.

The references relied upon by the examiner as evidence of unpatentability are:

Martini-Vvedensky et al. (Martini-Vvedensky)	4,473,665	Sep. 25, 1984
Cha et al. (Cha)	5,158,986	Oct. 27, 1992

Aubert 5,422,377 Jun. 06, 1995

Polyurethane Handbook: Chemistry-Raw Material-Processing Properties, pp. 248-49 (Hansen Pub., New York, 1985).

Claims 1 through 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Polyurethane Handbook in view of Aubert, Martini-Vvedensky, or Cha.

OPINION

For the reasons set forth in appellants' brief and reply brief, and below, we reverse the aforementioned rejection.

On page 6 of the brief, appellants state that none of the references teach the aspect of their claimed invention regarding cells having a dimension in a direction parallel to the opposed surfaces greater than a dimension in a direction parallel to the thickness dimension (expansion in only the thickness direction). Appellants also state that none of the references teach saturating the preformed object with a fluid in an atmosphere at a predetermined ambient pressure, and then reducing the ambient pressure to a pressure at which the preformed object is supersaturated with the fluid. We agree.

We further note that the excerpt on page 249 of the Polyurethane Handbook teaches that the cells are elongated in the direction of the rise which is opposite of the requirement set forth in appellants' claim 1, for example. The examiner recognizes this deficiency in the Polyurethane Handbook but states, on page 5 of the answer, that, "[w]ith regard to thickness dimension [it] is deemed that one skilled in the art would consider the thickness dimension and the cell formation therein would be well within the skill of the routineer to

achieve depending upon what type of object was intended allowing with the size of the thickness dimension called for."

Firstly, because the combination of references does not teach or suggest all the limitations of the claims, the examiner has not set forth a prima facie case. *See In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Also, the examiner's reasoning for concluding that it would have been obvious to modify the disclosure of the Polyurethane Handbook so as to expand the unfoamed polymeric material in only the thickness dimension is insufficient to establish a *prima facie* case for the following reasons.

We note that in order to establish a *prima facie* case of obviousness, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *See In re Fine*, 837 F.2d 1071, 1073-74, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *Ex parte Skinner*, 2 USPQ2d 1788, 1790 (Bd. App. & Int. 1986). The examiner's reasoning provides no such suggestion or incentive.

Also, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *See Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1207-08, 18 USPQ2d 1016, 1023 (Fed. Cir.) *cert. denied*, 502 U.S. 856 (1991). The examiner does not explain how the skilled artisan would have had a reasonable expectation of success of expanding the unfoamed polymeric material in only the thickness dimension to form the foamed polymeric material wherein interplanar gas-filled cells have a dimension in a direction

parallel to opposed surfaces greater than a dimension in a direction parallel to the thickness dimension. The examiner simply concludes that such a feature would be well within the skill of the routineer.

Moreover, the teachings or suggestions, as well as the expectation of success, must come from the prior art, not applicants' disclosure. *See In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). The mere fact that the prior art could be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Laskowski*, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989)(quoting *In re Gordon*, 733 F.2d 900, 902, 221 USPQ2d 1125, 1127 (Fed. Cir. 1984). Here, the examiner's rejection does not explain how the prior art suggests the desirability of the modification.

In view of the above, we therefore reverse the rejection.

CONCLUSION

The rejection of claims 1 through 23 under 35 U.S.C. § 103 as being unpatentable over Polyurethane Handbook in view of either Aubert, Martini-Vvedensky, or Cha is reversed.

REVERSED

TERRY J. OWENS	)	
Administrative Patent Judge	)	
	)	
	)	BOARD OF PATENT
BEVERLY A. PAWLIKOWSKI	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
JAMES T. MOORE	)	
Administrative Patent Judge	)	

BAP:hh

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